

## SEQUENCE LISTING

<110> McCutchen, Billy F.  
Herrmann, Rafael

<120> SCORPION TOXINS

<130> BB1208PCT

<140> 09/807,248

<141>

<150> 60/105,404

<151> 1998-10-23

<160> 17

<170> Microsoft Office 97

<210> 1

<211> 228

<212> DNA

<213> Leiurus quinquestriatus

<400> 1

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ccgaaaactg tgtctacatg tgcattccag attgcgacac gttatgtaag gataacgggtg 120
gtacgggtgg ccattgcgga tttaaacttg gacacggaat tgcttgcctgg tgcaatgcct 180
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<210> 2

<211> 75

<212> PRT

<213> Leiurus quinquestriatus

<220>

<221> SIGNAL

<222> (1)..(11)

<400> 2

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  1             5             10             15
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```
Ile Ala Gln Pro Glu Asn Cys Val Tyr His Cys Ile Pro Asp Cys Asp
      20             25             30
```

```
Thr Leu Cys Lys Asp Asn Gly Gly Thr Gly Gly His Cys Gly Phe Lys
      35             40             45
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Leu Gly His Gly Ile Ala Cys Trp Cys Asn Ala Leu Pro Asp Asn Val
      50             55             60
```

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Gly Ile Ile Val Asp Gly Val Lys Cys His Lys
      65             70             75
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<210> 3

<211> 238

<212> DNA

<213> Leiurus quinquestriatus

<220>

<221> unsure  
 <222> (28)  
 <223> n = a, c, g or t

<400> 3  
 tagtttggca cttctotttca tgacaggngt ggagagtgtg cgtgacgggt atattgccaa 60  
 gcccgaaaac tgtgcacacc attgctttcc agggctctcc ggttgcgaca cattatgtaa 120  
 ggaaaacggt ggtacgggtg gccattgcgg atttaaagtt ggacatggaa ctgcctgctg 180  
 gtgcaatgcc ttgcccagata aagtagggat tatagtagat ggagtaaaat gccatcgc 238

<210> 4  
 <211> 79  
 <212> PRT  
 <213> Leiurus quinquestriatus

<220>  
 <221> SIGNAL  
 <222> (1)..(12)

<400> 4  
 Ser Leu Ala Leu Leu Phe Met Thr Gly Val Glu Ser Val Arg Asp Gly  
 1 5 10 15  
 Tyr Ile Ala Lys Pro Glu Asn Cys Ala His His Cys Phe Pro Gly Ser  
 20 25 30  
 Ser Gly Cys Asp Thr Leu Cys Lys Glu Asn Gly Gly Thr Gly Gly His  
 35 40 45  
 Cys Gly Phe Lys Val Gly His Gly Thr Ala Cys Trp Cys Asn Ala Leu  
 50 55 60  
 Pro Asp Lys Val Gly Ile Ile Val Asp Gly Val Lys Cys His Arg  
 65 70 75

<210> 5  
 <211> 258  
 <212> DNA  
 <213> Leiurus quinquestriatus

<400> 5  
 atgaatcatt tggtaatgat tagtttggca cttcttttca tgacagggtg ggagagtggg 60  
 gtacgtgatg ggtatattgc ccagcccgaa aactgtgtct accattgctt tccagggtcc 120  
 cccggttgcg acacattatg taaagagaac ggtgcttcga gtggccattg cggatttaaa 180  
 gaaggacacg gacttgctg ctggtgcaat gatctgcccg ataaagtagg gataatagta 240  
 gaaggagaaa aatgccat 258

<210> 6  
 <211> 87  
 <212> PRT  
 <213> Leiurus quinquestriatus

<220>  
 <221> SIGNAL  
 <222> (1)..(19)

<400> 6  
 Met Asn His Leu Val Met Ile Ser Leu Ala Leu Leu Phe Met Thr Gly  
 1 5 10 15  
 Val Glu Ser Gly Val Arg Asp Gly Tyr Ile Ala Gln Pro Glu Asn Cys

20

25

30

Val Tyr His Cys Phe Pro Gly Ser Pro Gly Cys Asp Thr Leu Cys Lys  
                   35                                  40                                  45

Glu Asn Gly Ala Ser Ser Gly His Cys Gly Phe Lys Glu Gly His Gly  
           50                                  55                                  60

Leu Ala Cys Trp Cys Asn Asp Leu Pro Asp Lys Val Gly Ile Ile Val  
       65                                  70                                  75                                  80

Glu Gly Glu Lys Cys His Lys  
                                   85

&lt;210&gt; 7

&lt;211&gt; 85

&lt;212&gt; PRT

&lt;213&gt; Buthus occitanus

&lt;400&gt; 7

Met Ser Ser Leu Met Ile Ser Thr Ala Met Lys Gly Lys Ala Pro Tyr  
       1                                  5                                  10                                  15

Arg Gln Val Arg Asp Gly Tyr Ile Ala Gln Pro His Asn Cys Ala Tyr  
                   20                                  25                                  30

His Cys Leu Lys Ile Ser Ser Gly Cys Asp Thr Leu Cys Lys Glu Asn  
           35                                  40                                  45

Gly Ala Thr Ser Gly His Cys Gly His Lys Ser Gly His Gly Ser Ala  
       50                                  55                                  60

Cys Trp Cys Lys Asp Leu Pro Asp Lys Val Gly Ile Ile Val His Gly  
       65                                  70                                  75                                  80

Glu Lys Cys His Arg  
                                   85

&lt;210&gt; 8

&lt;211&gt; 252

&lt;212&gt; DNA

&lt;213&gt; Leiurus quinquestriatus

&lt;220&gt;

&lt;221&gt; unsure

&lt;222&gt; (16)

&lt;223&gt; n = a, c, g or t

&lt;400&gt; 8

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 tgcaacgatt tatgtaccaa gaacggtgct aagagtggct attgccaatg gttcggttca 180  
 agtggaacg cctgctggtg catagatttg cccgataacg taccgattaa agtaccagga 240  
 aaatgccatc gc 252

&lt;210&gt; 9

&lt;211&gt; 84

&lt;212&gt; PRT

&lt;213&gt; Leiurus quinquestriatus

&lt;220&gt;

<221> SIGNAL  
 <222> (1)..(19)

<220>  
 <221> UNSURE  
 <222> (6)  
 <223> Xaa = ANY AMINO ACID

<400> 9  
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 Val Glu Ser Gly Arg Asp Ala Tyr Ile Ala Gln Asn Tyr Asn Cys Val  
                   20                  25                  30  
 Tyr His Cys Ala Leu Asn Pro Tyr Cys Asn Asp Leu Cys Thr Lys Asn  
           35                  40                  45  
 Gly Ala Lys Ser Gly Tyr Cys Gln Trp Phe Gly Ser Ser Gly Asn Ala  
           50                  55                  60  
 Cys Trp Cys Ile Asp Leu Pro Asp Asn Val Pro Ile Lys Val Pro Gly  
           65                  70                  75                  80  
 Lys Cys His Arg

<210> 10  
 <211> 65  
 <212> PRT  
 <213> Buthus occitanus tunetanus

<400> 10  
 Gly Arg Asp Ala Tyr Ile Ala Gln Pro Glu Asn Cys Val Tyr Glu Cys  
           1                  5                  10                  15  
 Ala Gln Asn Ser Tyr Cys Asn Asp Leu Cys Thr Lys Asn Gly Ala Thr  
                   20                  25                  30  
 Ser Gly Tyr Cys Gln Trp Leu Gly Lys Tyr Gly Asn Ala Cys Trp Cys  
           35                  40                  45  
 Lys Asp Leu Pro Asp Asn Val Pro Ile Arg Ile Pro Gly Lys Cys His  
           50                  55                  60  
 Phe  
   65

<210> 11  
 <211> 256  
 <212> DNA  
 <213> Leiurus quinquestriatus

<400> 11  
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 gctgacggat atataagaag aaaagacgga tgcaagggtg catgcctggt cggaatgac 120  
 ggctgcaata aagaatgcaa agcttatggt gcctattatg gatattgttg gacctgggga 180  
 cttgcctgct ggtgcgaagg tcttccggat gacaagacat ggaagagtga aacaaacaca 240  
 tgcggtggca aaaagt 256

<210> 12

<211> 85  
 <212> PRT  
 <213> Leiurus quinquestriatus

<220>  
 <221> SIGNAL  
 <222> (1)..(21)

<400> 12  
 Met Lys Ile Ile Ile Phe Leu Ile Val Ser Ser Leu Met Leu Ile Gly  
           1                  5                  10                  15  
 Val Lys Thr Asp Asn Gly Tyr Leu Leu Asn Lys Ala Thr Gly Cys Lys  
                   20                  25                  30  
 Val Trp Cys Val Ile Asn Asn Ala Ser Cys Asn Ser Glu Cys Lys Leu  
                   35                  40                  45  
 Arg Arg Gly Asn Tyr Gly Tyr Cys Tyr Phe Trp Lys Leu Ala Cys Tyr  
           50                  55                  60  
 Cys Glu Gly Ala Pro Lys Ser Glu Leu Trp Ala Tyr Ala Thr Asn Lys  
           65                  70                  75                  80  
 Cys Asn Gly Lys Leu  
                   85

<210> 13  
 <211> 255  
 <212> DNA  
 <213> Leiurus quinquestriatus

<400> 13  
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 gctgacggat atataagagg aggcgacgga tgcaagggtt catgcgtgat aaatcatgtg 120  
 ttttgtgata atgaatgcaa agctgctggt ggctcttatg gatattgttg ggctgggga 180  
 cttgcctgct ggtgcgaagg tcttcagct gacagggaat ggaagtatga aaccaataca 240  
 tgcggtggca aaaag 255

<210> 14  
 <211> 85  
 <212> PRT  
 <213> Leiurus quinquestriatus

<220>  
 <221> SIGNAL  
 <222> (1)..(21)

<400> 14  
 Met Lys Leu Leu Leu Leu Leu Thr Ile Ser Ala Ser Met Leu Ile Glu  
           1                  5                  10                  15  
 Gly Leu Val Asn Ala Asp Gly Tyr Ile Arg Gly Gly Asp Gly Cys Lys  
                   20                  25                  30  
 Val Ser Cys Val Ile Asn His Val Phe Cys Asp Asn Glu Cys Lys Ala  
                   35                  40                  45  
 Ala Gly Gly Ser Tyr Gly Tyr Cys Trp Ala Trp Gly Leu Ala Cys Trp  
           50                  55                  60

Gly Tyr Cys Trp Thr Trp Gly Leu Ala Cys Trp Cys Glu Gly Leu Pro  
35 40 45

Asp Asp Lys Thr Trp Lys Ser Glu Thr Asn Thr Cys Glu  
50 55 60